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Event-plane dependent away-side jet-like correlation shape in Au+Au collisions at 200 GeV from STAR LIANG ZHANG, Central China Normal University and Purdue University, STAR COLLABORATION — A strongly coupled quark gluon plasma (QGP) is created in relativistic heavy-ion collisions. Jets are a good probe of the energy loss properties of the QGP experienced by hard partons traversing the medium. The purpose of this analysis is to investigate the event plane (EP) dependence of jet energy loss. Measurements of jet-like correlations are complicated by the large underlying anisotropic flow background. In this analysis, we require a large recoil (P_x) within a given pseudo-rapidity (η) range from a high-p_T trigger particle to enhance in-acceptance population of away-side jet. We subtract the flow background by taking the difference of the two-particle correlation in the close-region and far-region with respect to the η region of P_x. The close- and far-region are symmetric about mid-rapidity. We analyze the correlation shape as a function of the trigger particle azimuthal angle relative to the EP, which is reconstructed from the beam-beam counters (BBCs) that are displaced by several units in η from the mid-rapidity region. The large η gap can effectively eliminate the correlation between trigger particles and EP. EP-dependent away-side jet-like correlation shapes and their implications for jet-medium interactions will be discussed.

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